

REMARKS

Claims 1-43 presently appear in this case. No claims have been allowed. Claims 36-43 have been withdrawn from consideration. Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Objection to withdrawal of claims

Applicant objects to the examiner's unilateral withdrawal of new claims 36-43 from consideration. Under "Status of the Application" the examiner indicates that "the claims 36-43 will not be examined on the merits herein because they are drawn to an invention non-elected by original disclosure, and are thus withdrawn. That is, they are drawn to a method of printing whereas the previously presented claims are drawn to an ink composition, which is a patentably distinct invention."

The examiner's assertion of "election by original disclosure" ignores the fact that the original disclosure (page 23, beginning at line 26) clearly states: "The present invention thus provides a simple method and compositions ...". Thus, the examiner's statement that "... the claims 36-43 ... are drawn to an invention non-elected by original disclosure..." seems to lack factual basis.

Applicant notes that there is no citation of any statute, or USPTO procedure as set forth in the MPEP, to support unilateral withdrawal of claims by the examiner. However, it appears that the examiner is relying on MPEP 821.03 as a basis for the unilateral withdrawal of claims 36-43. According to MPEP 821.03, the examiner should explain how claims 36-43 are "...directed to an invention that is independent or distinct from the invention originally claimed..." giving one or more specific reasons.

The examiner's statement that " ...they are drawn to a method of printing whereas the previously presented claims are drawn to an ink composition, which is a patentably distinct invention" is merely conclusory and provides no analysis of "patentable distinctness" as required by MPEP 808.01.

MPEP 808.01 (emphases added) requires that "The particular reasons relied on by the examiner for holding that the inventions as claimed are either independent or distinct should be concisely stated. A mere statement of conclusion is inadequate. The reasons upon which the conclusion is based should be given."

In addition, applicant notes that the instant application is a national phase filing of PCT IL2004/000771 so that §206 of Appendix AI [Administrative Instructions Under the PCT] applies:

The determination by the International Searching Authority, the International Preliminary Examining Authority and the designated and elected Offices whether an international application complies with the requirement of unity of invention under Rule 13 shall be made in accordance with Annex B.
[emphasis added]

Rule 13 of the PCT states:

The international application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept ("requirement of unity of invention").

Applicant traverses the examiner's unilateral withdrawal of claims 36-43 as follows:

Claims 37-42 actually depend, directly or indirectly, from claim 1. In consideration of this dependence, claims 37-42 must be deemed part of the same invention as claim 1 because they include all of the limitations of the base claim from which they depend. Therefore, claims 37-42 meet the "one invention only" criteria of PCT Rule 13.

With regard to claims 36 and 43:

Claim 36 as currently before the examiner is directed towards (emphases added):

A method of printing on a ceramic substrate, the method comprising:

- (a) preparing an ink composition which is liquid at room temperature, the ink composition comprising a vehicle and

sub-micron particles of binding
composition;

- (b) applying the ink to the ceramic
substrate at a viscosity below 20 cps;
and
- (c) firing the substrate at a temperature
above 500°C so that the sub-micron
particles become an integral part of
the substrate.

Claim 43 as currently before the examiner is directed towards
(emphases added):

A method of printing on a glass substrate,
comprising:

ink jet printing a composition comprising a
vehicle being a liquid at room temperature
and having sub-micron particles of binding
composition and having viscosity below 20
cps at jetting temperature onto the glass
substrate to produce a pattern;

fixing the pattern to the substrate by
application of energy; and

firing the substrate at a temperature above
500°C and below 700 °C so that the
composition becomes an integral part of the
substrate.

Claim 1 as currently before the examiner is directed towards
(emphases added):

An ink composition for printing on a glass
substrate, to be fused to the substrate upon
firing, the ink characterized by:

- (a) having viscosity, below 20 cps at
jetting temperature and having 39-50%
solids content; and

- (b) becoming an integral part of the
substrate upon exposure to temperatures
above 500°C and below 700°C;

the ink composition comprising :

- 1) a vehicle being a liquid at 15°C; and
- 2) sub-micron particles of binding composition.

Applicant's position is that the emphasized portions of claims 36, 43 and 1 constitute a single general inventive concept so that these three claims have unity of invention as required by PCT Rule 13.

All of claims 36-43 entered as part of the previous response should be examined for at least these reasons. The examiner is respectfully requested to rejoin claims 36-43. Applicant reserves the right to petition the Director to rejoin claims 36-43 if the examiner chooses not to rejoin claims 36-43 in response to this request.

Incompleteness of current office action

Applicant respectfully suggests that the current Office Action is incomplete because it does not comply with the provisions of MPEP 707.07(i) which states that "In every Office action, each pending claim should be mentioned by number, and its treatment or status given."

Although claims 36-43 are mentioned, indication of their status as "withdrawn" is insupportable as set forth in

detail above. This creates a situation in which these claims are neither rejected according to any statute, nor specifically allowed.

Applicant notes that since claims 36-43 are not currently amended, any art based rejection of claims 36-43 should be made in a non-final office action.

Request to rescind finality

Applicant respectfully requests that the finality of the current Office action be rescinded because it is incomplete with regard to claims 36-43 as set forth above in detail.

Applicant reserves the right to petition the director to rescind finality if the examiner chooses not to rescind finality in response to this request.

Amendments To The Claims

Claims 1 and 35 have been amended to read:"

(a) having viscosity, below 20 cps at
jetting temperature and having 39-50% solids
content;

Support for the feature "39-50% solids content" is found in the specification at page 16, line 5. Applicant respectfully suggests no new matter is introduced into the application by this amendment.

35 U.S.C. § 112 first paragraph rejections

The examiner has rejected claims 1-34 under §112, first paragraph, as failing to comply with the written description requirement. Specifically, the examiner indicates that the term "non-wax vehicle" is not sufficiently supported in the original disclosure.

The present claims have now been amended to delete the term "non-wax," although applicant disagrees that it was new matter. Rather, claims 1 and 34 now recite that the ink composition vehicle is liquid at 15°C. This new claim language is supported by the disclosure at page 8, line 28, of the specification, which states that the vehicle is liquid at room temperature and defines room temperature as 15-28°C. Accordingly, this provides support for a vehicle that is liquid at 15°C.

The "non-wax" feature was added to claims 1 and 34 in order to define over the Doyle reference. However, the newly claimed feature of being liquid at 15°C also defines over Doyle. The phase change ink of Doyle must be solid when the printer is turned off. While Doyle states that the carrier material has a melting point of "from 20 to 150°C, preferably 50 to 100°C" (see paragraph [0017] of Doyle), the extreme lower limit of 20°C is already unreasonable as a carrier with such a low melting point would only be workable

in extremely cold climates with room temperatures below 20°C. The first sentence of paragraph [0031] of Doyle states that "the ink remains in a solid form while in storage and when the temperature of the printer is lower than the melting point of the ink carrier material, for example when the printer is switched off." Accordingly, a carrier that is liquid at 15°C would not be anticipated by Doyle. Furthermore, there would be no motivation for one of ordinary skill in the art to use a carrier in Doyle that has a melting point below 15°C as such an ink would clearly be inoperable for the purposes of Doyle. Accordingly, the present claims contain nothing that is even arguably new matter and they still define over Doyle. Reconsideration and withdrawal of this rejection are therefore respectfully urged.

35 U.S.C. § 103 Rejections: Nyssen in view of Nicolin

The examiner has rejected claims 1-10, 15-16, 22-24, 26, 29-30, 32-33 and 35 under §103(a) as being unpatentable over US 6,245,138 (hereinafter Nyssen) in view of US 6,336,723 (hereinafter Nicolin). This rejection is respectfully traversed.

Claim 1 as currently before the examiner is directed towards (emphasis added):

1 (Currently Amended). An ink composition for printing on a glass substrate, to be fused to the substrate upon firing, the ink characterized by:

- a) having viscosity, below 20 cps at jetting temperature and having 39-50% solids content; and
- b) becoming an integral part of the substrate upon exposure to temperatures above 500°C and below 700 °C;

the ink composition comprising :

- 1) a vehicle being a liquid at 15°C; and
- 2) sub-micron particles of binding composition.

Nyssen expressly states (Example 9, column 16; lines 49-52) :

The preparation thus obtained was diluted to a pigment concentration of 4% for use as a printing ink for ink-jet printing. The composition and properties of the printing ink were chosen as follows:...

Applicant notes that pigment is the only component which contributes to solids content of the Nyssen ink. Thus, Nyssen does not meet the claimed feature of "An ink composition ... having 39-50% solids content."

Nicolin is completely silent as to the possibility of preparing any ink composition with 39-50% solids content as instantly claimed, stating only that the population of particles in his ink "contains at least 90% by weight of

particles which have a diameter less than 25 μm ." Nicolín does not indicate any solids content and it is not possible to infer any solids content from the description of the population of particles in Nicolín.

Application of the teachings of Nicolín to the Nyssen invention would not be predicted to increase the solids content from 4% (as described by Nyssen) to the instantly claimed 39-50%. Since there is no obvious way to achieve what is claimed by combining Nyssen and Nicolín, the §103(a) rejection based upon these references should be withdrawn.

Claims 11-14, 17-21, 25, 27, 31 and 34 are each patentable over Nyssen in view of Nicolín at least by virtue of their dependence from claim 1. Claim 35 is patentable over Nyssen in view of Nicolín at least for similar reasons as claim 1.

Additional 35 U.S.C. § 103 Rejections: Nyssen in view of Nicolín and others

The examiner has rejected claims 11-14 under §103(a) as being unpatentable over Nyssen in view of Nicolín and further in view of Knajer (US 6,346,493).

The examiner has rejected claims 17-18 and 34 under §103(a) as being unpatentable over Nyssen in view of Nicolín and further in view of Aoki (US 5,743,946).

The examiner has rejected claims 19-21 under §103(a) as being unpatentable over Nyssen in view of Nicolin and further in view of Hermann (US 6,332,043).

The examiner has rejected claims 25 and 27-28 under §103(a) as being unpatentable over Nyssen in view of Nicolin and further in view of Woolf (US 5,897,694).

The examiner has rejected claim 31 under §103(a) as being unpatentable over Nyssen in view of Nicolin and further in view of Zhu (US 6,251,175).

All claims rejected in these additional §103(a) rejections depend from claim 1 directly or indirectly. Applicant has demonstrated that the combination of Nyssen and Nicolin does not produce all of the features of claim 1 as set forth in detail hereinabove. There is not currently any indication in the record that the additional references provide the missing feature or render it obvious. Therefore, claims 11-14, 17-21, 25, 27-28 and 34 are all patentable over the cited combinations of Nyssen and Nicolin with a third reference at least by virtue of their dependence from claim 1.

All issues raised by the examiner have been addressed.

In view of the above amendments and remarks it is respectfully submitted that claims 1-35, as well as disputed claims 36-43, are now in condition for allowance. Prompt notice of allowance is respectfully and earnestly solicited. In the unlikely event that a notice of allowance is not forthcoming, an additional non-final office action would be proper since the current office is incomplete and its finality is therefore improper.

Applicant's representative is amenable to a telephone interview in lieu of an additional non-final office action in order to attempt to resolve any remaining issues.

Respectfully submitted,

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